

## WHAT IS CLAIMED IS:

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1. A process for manufacturing a semiconductor device comprising the steps of:

defining a number of semiconductor chip sections on a wafer, each semiconductor chip section having a number of chip electrodes formed on one surface along a periphery thereof, the one surface being covered with a passivating film except for the positions where the chip electrodes are formed;

forming a number of interconnection layers on the wafer for each semiconductor chip section such that each interconnection layer is connected to the chip electrode at one end thereof and is extended inward the chip section at the other end;

covering the entire surface of the wafer with a cover coating film;

forming a number of apertures in the cover coating film, the apertures being formed into a matrix;

forming a number of bumps on the respective apertures; and

separating the semiconductor chip sections on the wafer as individual semiconductor chips along scribe lines.

2. A process for manufacturing a semiconductor device as claimed in claim 1, wherein the interconnection layer is extended inward where the semiconductor chip

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section is exposed to the atmosphere through the aperture.

3. A process for manufacturing a semiconductor device as claimed in claim 1, wherein the bumps are formed away from the scribe line.

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4. A process for manufacturing a semiconductor device as claimed in claim 1, wherein the bumps are formed at the position except for just over the chip electrodes.

5. A semiconductor wafer having a number of semiconductor chips, comprising bump electrodes formed into a matrix on an entire surface of the wafer except for on scribe lines between the semiconductor chips.

6. A process for manufacturing a semiconductor device having a number of chip electrodes, a number of bump electrodes, and interconnecting layers for electrically connecting the chip electrode and the bump electrode, the process comprising the steps of:

providing a wafer having a number of chip sections defined thereon by scribe lines, each chip section having the chip electrodes formed thereon;

providing the interconnection layers such that each interconnection layer is connected to the chip electrode at one end thereof and the other end of the interconnection layer is extended towards the central portion of the chip section;

applying a coating film over the entire surface of the wafer and the interconnection layers;

forming a number of apertures in the coating film passing therethrough;

forming the bump electrodes at the position corresponding to the apertures; and

separating the chip sections from each other along the scribe lines.

7. A process for manufacturing a semiconductor device as claimed in claim 6, wherein the chip section is rectangular.

8. A process for manufacturing a semiconductor device as claimed in claim 6, wherein the interconnection layer extends to the position where the aperture is formed.

9. A process for manufacturing a semiconductor device as claimed in claim 6, wherein the bump electrodes are located other than the place just over the chip electrodes.

10. A semiconductor wafer having a number of chip sections defined thereon by scribe lines, each chip section having bump electrodes formed thereon, the scribe lines being for separating the chip sections from each other without dividing the bump electrode.

11. A semiconductor wafer having a number of chip sections defined thereon by scribe lines, each chip section having bump electrodes formed thereon.

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